

Shallow Loamy

Higher real

Water

estate values

conservation

Long term

income \$\$\$

Erosion control

by holding the

soil in place

Range Health: Economics of Maintaining Plant/Grass roots through Soil Health.

Management: Continuous summer grazing

Compacted

soil

Lower real

Lowered water

storage; more

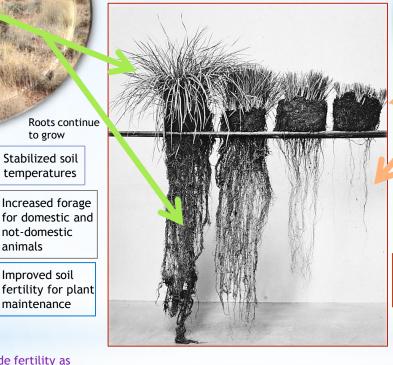
runoff

Biological

Chemical

estate values

"Root biomass and health is a direct reflection of above ground biomass and health and critical for healthy soil biology"



Roots stop

Loss of future range production

Grass recovery is slow to very slow

growing

Decreased forage for domestic and notdomestic animals

Invasive/undesirable plants likely to occur Loss of plant vigor

Shallow Loamy

Long term loss of income \$\$

Higher maintenance costs

Soil loss by wind/water erosion

Physical

Suppressed rangeland ecological processes will diminish physiological and biological returns of nutrient cycling i.e. loss in soil nutrients decreases the amount of above and below ground biomass for future maintenance and sustainability.



USDA is an equal opportunity provider and employer.

Rangeland ecological processes will exude fertility as long as there is rest and recovery to allow for nutrient cycling, allowing for the adequate production (self-maintenance) of vegetation.

Five Soil Health Principles

* Plant Diversity

Increased soil

Quicker plant

reproduction

development and

moisture (infiltration)

* Cover The Soil

to grow

Stabilized soil

temperatures

not-domestic

Improved soil

maintenance

animals

- * Less soil disturbance * Living roots year around
- * Livestock integration/Adaptive Grazing Mgt.

"Management must be your goal."

About 50% of the total volume of plant growth is available for the production of livestock and livestock product. The rest belongs to the land and the plant for insurance against drought.

Rangeland Principle: "Take half / leave half"

Clarence Chavez: 7/2014

Agronomy Tech Note 76: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/nm/technical/?cid=nrcs144p2 068965